

Fig. 2

Fig. 1

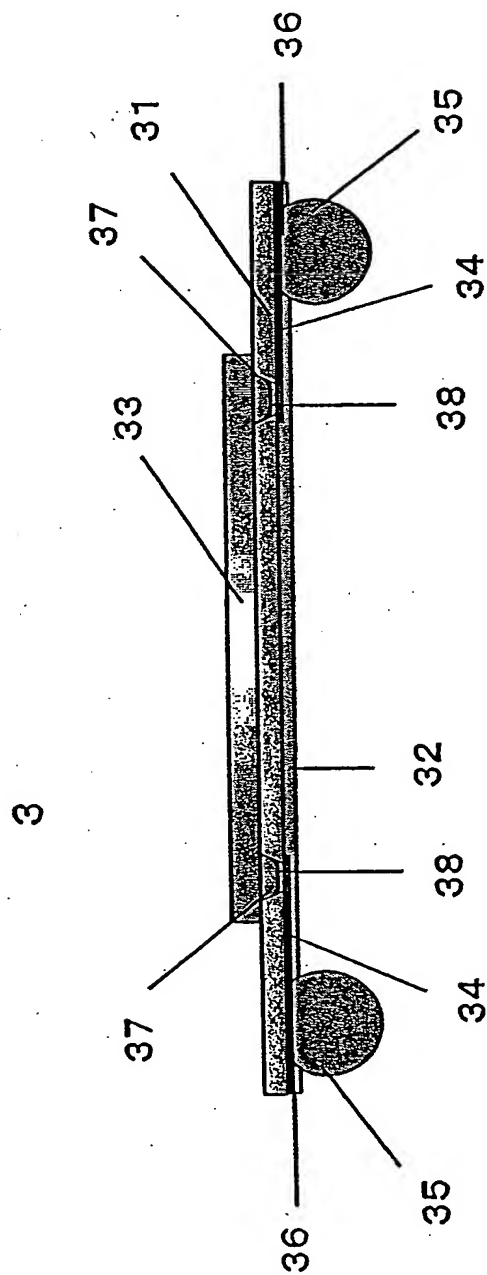


Fig. 3

		Ex. 11	Ex. 12	Ex. 13	Ex. 14	Ex. 15
First resin	PRIMASET PT-60	10	10	10	14	10
	PRIMASET PT-60A					
	NC-3000SH					
Second resin	PRIMASET PT-30	10	10	10	14	10
	LACY					
	EP-830					
Resin having low moisture absorbency	NC-3000SH	12	12	12	17	12
	ARTON					
Curing agent	MEH-7851-3H		8	8	11	8
	PR-51714	8				
Filler	SFP-10X	60			44	60
	FB-5SDX		60			
	AO-802			60		
Reaction rate (%)		5	5	5	5	5
Evaluations	Flexibility	A	A	A	A	A
	Development of tack	A	A	A	B	A
	Generation of dust	A	A	A	A	A
	Resin flow (%)	12	5	15	25	15
	Processability with laser	B	B	B	B	A

		Ex. 16	Com. 1	Com. 2	Com. 3	Com. 4
First resin	PRIMASET PT-60		20		25	10
	PRIMASET PT-60A					
	NC-3000SH	22				
Second resin	PRIMASET PT-30			20	25	10
	LACY					
	EP-830	10				
Resin having low moisture absorbency	NC-3000SH		12	12	30	20
	ARTON					
Curing agent	MEH-7851-3H	8	8	8	20	
	PR-51714					
Filler	SFP-10X	60	60	60		60
	FB-5SDX					
	AO-802					
Reaction rate (%)		5	5	5	5	5
Evaluations	Flexibility	A	D	A	A	A
	Development of tack	A	A	D	C	A
	Generation of dust	A	D	A	A	A
	Resin flow (%)	25	15	15	40	25
	Processability with laser	A	B	B	B	B

Fig. 4

Table 1

		Ex.1	Ex.2	Ex.3	Ex.4	Ex.5
First resin	PRIMASET PT-60	10	13	10	10	
	PRIMASET PT-60A					10
Second resin	PRIMASET PT-30	10	13	10	10	10
	LACY					
Resin having low moisture absorbency	NC-3000SH	12	8	12	12	12
	ARTON					
Curing agent	MEH-7851-3H	8	6	8	8	8
	PR-51714					
Filler	SFP-10X	60	60	60	60	60
	FB-5SDX					
	AO-802					
Reaction rate (%)		5	5	20	30	5
Evaluations	Flexibility	A	A	A	A	B
	Development of tack	A	A	A	A	A
	Generation of dust	A	A	A	B	A
	Resin flow (%)	15	20	12	10	10
	Processability with laser	B	B	B	B	B

		Ex.6	Ex.7	Ex.8	Ex.9	Ex.10
First resin	PRIMASET PT-60	10	18.5	5	10	15
	PRIMASET PT-60A					
Second resin	PRIMASET PT-30		1.5	15	10	15
	LACY	10				
Resin having low moisture absorbency	NC-3000SH	12	12	12		6
	ARTON				12	
Curing agent	MEH-7851-3H	8	8	8	8	4
	PR-51714					
Filler	SFP-10X	60	60	60	60	60
	FB-5SDX					
	AO-802					
Reaction rate (%)		5	5	5	5	5
Evaluations	Flexibility	A	B	A	A	A
	Development of tack	B	A	B	A	A
	Generation of dust	A	B	A	A	A
	Resin flow (%)	20	12	18	20	20
	Processability with laser	B	B	B	B	B

Fig. 4

Table 2

		Ex.1a	Ex.2a	Ex.3a	Ex.4a	Ex.5a
Prepreg		Ex.1	Ex.2	Ex.3	Ex.4	Ex.5
Evaluations	Flammability	V-0	V-0	V-0	V-0	V-0
	Resistance to heat and moisture (sec)	>120	>120	>120	>120	>120
	Coefficient of thermal expansion (ppm)	15	13	15	15	15

		Ex.6a	Ex.7a	Ex.8a	Ex.9a	Ex.10a
Prepreg		Ex.6	Ex.7	Ex.8	Ex.9	Ex.10
Evaluations	Flammability	V-0	V-0	V-0	V-1	V-0
	Resistance to heat and moisture (sec)	>120	>120	>120	>120	30
	Coefficient of thermal expansion (ppm)	25	13	16	17	12

		Ex.11a	Ex.12a	Ex.13a	Ex.14a	Ex.15a
Prepreg		Ex.11	Ex.12	Ex.13	Ex.14	Ex.15
Evaluations	Flammability	V-0	V-0	V-0	V-0	V-1
	Resistance to heat and moisture (sec)	30	>120	>120	>120	>120
	Coefficient of thermal expansion (ppm)	15	15	20	28	30

		Ex.16a	Com.1a	Com.2a	Com.3a	Com.4a
Prepreg		Ex.16	Com.1	Com.2	Com.3	Com.4
Evaluations	Flammability	V-1	V-0	V-0	V-1	V-1
	Resistance to heat and moisture (sec)	>120	>120	>120	>120	10
	Coefficient of thermal expansion (ppm)	30	12	17	40	15

Fig. 5

Table 3

		Ex.1b	Ex.2b	Ex.3b	Ex.4b	Ex.5b
Prepreg with metallic foil		Ex.1	Ex.2	Ex.3	Ex.4	Ex.5
Evaluations	Thermal cycling test	0/10	0/10	0/10	0/10	0/10
	Insulation resistance after humidification	0/10	0/10	0/10	0/10	0/10

		Ex.6b	Ex.7b	Ex.8b	Ex.9b	Ex.10b
Prepreg with metallic foil		Ex.6	Ex.7	Ex.8	Ex.9	Ex.10
Evaluations	Thermal cycling test	0/10	0/10	0/10	0/10	0/10
	Insulation resistance after humidification	0/10	0/10	0/10	0/10	0/10

		Ex.11b	Ex.12b	Ex.13b	Ex.14b	Ex.15b
Prepreg with metallic foil		Ex.11	Ex.12	Ex.13	Ex.14	Ex.15
Evaluations	Thermal cycling test	0/10	0/10	0/10	0/10	0/10
	Insulation resistance after humidification	0/10	0/10	0/10	0/10	0/10

		Ex.16b	Com.1b*	Com.2b*	Com.3b	Com.4b
Prepreg with metallic foil		Ex.16	Com.1	Com.2	Com.3	Com.4
Evaluations	Thermal cycling test	0/10	-	-	10/10	0/10
	Insulation resistance after humidification	0/10	-	-	0/10	5/10

* no semiconductor packages were manufactured since development of tack and generation of dust were observed in the prepregs prepared in Comparative Examples 1 and 2

Fig. 6